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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/464,161	12/16/1999	SHINICHIRO GOMI	450100-02228	7195

20999 7590 05/02/2002

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EXAMINER

NGUYEN, KEVIN M

ART UNIT PAPER NUMBER

2674

DATE MAILED: 05/02/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/464,161

Applicant(s)

GOMI ET AL.

Examiner

Kevin M. Nguyen

Art Unit

2674

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. The amendment filed on 2/28/2002 is entered. The rejections of claims 1-5 and 9 are maintained.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, an extracted element, an extracted image, a first image, and a second image must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1 and 9 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This claim claims an image processing apparatus comprising extraction means for extracting, by detecting edges of the second image, the second image from the first image. Extraction means for extracting, by detecting edge of the first image, the first image from the second

image (recite in claim 9). At page 13, line 1 to page 14, line 1, the specification describes in the step S1, the CPU 21 extracts an image in an area showing the screen 1 from the captured image. Which the first image or the second image is extracted. How the first image or the second image are extracted. The unclearly describe extraction means for extracting, by detecting edges of the second image or the first image, the second image or the first image from the first image or the second image the claimed invention.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 1-5 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Ogawa (US 5,572,251) in view of Takaha (US 6,021,221).**

As to claim 1, Ogawa teaches an image processing apparatus which includes the camera 12 (capture second image) faces the screen 11 to receive light from the light point 14 on the screen 11 and the optical position (coordinate data) detecting unit 12 of the light point 14 (see Fig. 1, col. 3, lines 20-24). A projector 13 projects a screen 11. The all pixels are ON/OFF –controlled so that the windows 45 having the maximum value of mean brightness can be formed (blinking-pattern detection means, see col. 7, lines 7-9). Binarizing the image information (Fig. 4), a light point 14 to be detected is displayed on the screen 11 by the laser point 15. Light 21 reflected from the light point

14 enters the optical position-detecting unit 12 (see col. 6, lines 6-8). Therefore, Ogawa teaches all of the claimed limitation of claim 1, except for "extraction means for extracting, by detecting edge of the second image, the second image from the first image." However, Takaha teaches a related image processing apparatus which includes an image extracting unit 17 (figure 1) to extract the image 42 (figure 3), by detecting the contour region 25 constructing by pixels of an outermost edge portion (figure 4, col. 10, lines 30-32). It would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the image extracting unit 17 taught by Takaha for the computer unit 17 of Ogawa's system in order to extract precision of the desired extract region can be enhanced (col. 4, lines 47-48 of Takaha).

As to claim 2, Ogawa teaches the optical position-detecting unit 12 (position determination means) compensates the position of the light point 14 on the second image to determine the position of the light point 14 on the first image (see col. 5, lines 61 to col. 6, line 2).

As to claim 3, Ogawa teaches the image pick up by the CCD image sensor 27, a part or patter drawn in the patter plate 24 (col. 5, line 26-27), the pattern shown in Fig. 4 as code "1" and "0" (col. 5, lines 6-9), step 26 shows the code sequence which obtained is converted into the coordinates of the center pattern (col. 7, lines 66-67).

As to claim 4, Ogawa teaches a method for an image processing apparatus which includes the camera 12 (capture second image) faces the screen 11 to receive light from the light point 14 on the screen 11 and the optical position (coordinate data) detecting unit 12 of the light point 14 (see Fig. 1, col. 3, lines 20-24). A projector 13

projects a screen 11. The all pixels are ON/OFF –controlled so that the windows 45 having the maximum value of mean brightness can be formed (blinking-pattern detection means, see col. 7, lines 7-9). Binarizing the image information (Fig. 4), a light point 14 to be detected is displayed on the screen 11 by the laser point 15. Light 21 reflected from the light point 14 enters the optical position-detecting unit 12 (see col. 6, lines 6-8). Therefore, Ogawa teaches all of the claimed limitation of claim 4, except for “extraction means for extracting, by detecting edge of the second image, the second image from the first image.” However, Takaha teaches a related method for an image processing apparatus which includes an image extracting unit 17 (figure 1) to extract the image 42 (figure 3), by detecting the contour region 25 constructing by pixels of an outermost edge portion (figure 4, col. 10, lines 30-32). It would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the image extracting unit 17 taught by Takaha for the computer unit 17 of Ogawa’s system in a manner to extract precision of the desired extract region can be enhanced (col. 4, lines 47-48 of Takaha).

As to claim 5, Ogawa teaches an image processing apparatus which includes the camera 12 (capture second image) faces the screen 11 to receive light from the light point 14 on the screen 11 and the optical position (coordinate data) detecting unit 12 of the light point 14 (see Fig. 1, col. 3, lines 20-24). A projector 13 projects a screen 11. The all pixels are ON/OFF –controlled so that the windows 45 having the maximum value of mean brightness can be formed (blinking-pattern detection means, see col. 7, lines 7-9). Binarizing the image information (Fig. 4), a light point 14 to be detected is

displayed on the screen 11 by the laser point 15. Light 21 reflected from the light point 14 enters the optical position-detecting unit 12 (see col. 6, lines 6-8). Therefore, Ogawa teaches all of the claimed limitation of claim 5, except for "extraction means for extracting, by detecting edge of the second image, the second image from the first image." However, Takaha teaches a related image processing apparatus which includes the central processing circuit 4 executing various sort of programs (col. 8, lines 59-60), an image extracting unit 17 (figure 1) to extract the image 42 (figure 3), by detecting the contour region 25 constructing by pixels of an outermost edge portion (figure 4, col. 10, lines 30-32). It would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the image extracting unit 17 taught by Takaha for the computer unit 17 of Ogawa's system in order to extract precision of the desired extract region can be enhanced (col. 4, lines 47-48 of Takaha).

As to claim 9, Ogawa teaches a presentation system (see Fig. 1, col. 3, lines 17-18), a projector 13 projects a screen 11, a laser pointer 15, the camera 12, the image processing means for determining the position of the bright point on the first image from image information indicating the second image and for binarizing the image information to detect the blinking pattern of the bright point on the first image (the computer unit 17 performs data processing, col. 3, lines 32-34), combination means for combining the first image correspondingly to the position of the bright point and the blinking pattern of the bright point detected by the image processing means (the computer unit 17, col. 3, lines 24-31). Therefore, Ogawa teaches all of the claimed limitation of claim 9, except for "extraction means for extracting, by detecting edge of the first image, the first image

from the second image." However, Takaha teaches a related image processing apparatus which includes the central processing circuit 4 executing various sort of programs (col. 8, lines 59-60), an image extracting unit 17 (figure 1) to extract the image 42 (figure 3), by detecting the contour region 25 constructing by pixels of an outermost edge portion (figure 4, col. 10, lines 30-32). It would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the image extracting unit 17 taught by Takaha for the computer unit 17 of Ogawa's system in order to extract precision of the desired extract region can be enhanced (col. 4, lines 47-48 of Takaha).

5. Claims 1-5 and 9 are also rejected under 35 U.S.C. 102(b) as being anticipated by Marshall et al (US 5,502,459).

As to claims 1 and 4, Marshall teaches the apparatus and the method of an image processing which includes a camera 34, the primary image 24 (the first image), the spot on/off flag 27 (blinking pattern) was detected by the camera 34 (a captured second image) and processed by the microprocessor 42 (Fig. 1, see col. 6, lines 40-45). Therefore, Marshall teaches all of the claimed limitation of claims 1 and 4, except for "extraction means for extracting, by detecting edge of the second image, the second image from the first image." However, Takaha teaches a related image processing apparatus which includes the central processing circuit 4 executing various sort of programs (col. 8, lines 59-60), an image extracting unit 17 (figure 1) to extract the image 42 (figure 3), by detecting the contour region 25 constructing by pixels of an outermost edge portion (figure 4, col. 10, lines 30-32). It would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the image extracting

unit 17 taught by Takaha for the computer unit 12 of Marshall's system in order to extract precision of the desired extract region can be enhanced (col. 4, lines 47-48 of Takaha).

As to claims 2 and 3, Marshall teaches the position determination means (see col. 6, lines 31-34), the spot on/off flag 27 (blinking pattern) was detected by the camera 34 (a captured second image) and processed by the microprocessor 42 (Fig. 1, see col. 6, lines 40-45).

As to claim 5, Marshall teaches the computer 12, which inherently includes the medium for a computer readable program. Therefore, Marshall teaches all of the claimed limitation of claim 5, except for "extraction means for extracting, by detecting edge of the second image, the second image from the first image." However, Takaha teaches a related image processing apparatus which includes the central processing circuit 4 executing various sort of programs (col. 8, lines 59-60), an image extracting unit 17 (figure 1) to extract the image 42 (figure 3), by detecting the contour region 25 constructing by pixels of an outermost edge portion (figure 4, col. 10, lines 30-32). It would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the image extracting unit 17 taught by Takaha for the computer unit 12 of Marshall's system in order to extract precision of the desired extract region can be enhanced (col. 4, lines 47-48 of Takaha).

As to claim 9, Marshall teaches the optical system 11, a LDC 13, the computer 12, an overhead projector 20, the camera 34 (see col. 4, lines 20-29) which are made up the presentation system as claimed. Therefore, Marshall teaches all of the claimed

limitation of claim 9, except for "extraction means for extracting, by detecting edge of the first image, the first image from the second image." However, Takaha teaches a related image processing apparatus which includes the central processing circuit 4 executing various sort of programs (col. 8, lines 59-60), an image extracting unit 17 (figure 1) to extract the image 42 (figure 3), by detecting the contour region 25 constructing by pixels of an outermost edge portion (figure 4, col. 10, lines 30-32). It would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the image extracting unit 17 taught by Takaha for the computer unit 12 of Marshall's system in order to extract precision of the desired extract region can be enhanced (col. 4, lines 47-48 of Takaha).

6. Claims 1-5 and 9 are also rejected under 35 U.S.C. 102(b) as being anticipated by Barrus (US 5,914,783).

As to claims 1, 4 and 9, Barrus teaches the presentation 12, a laser pointer 22, a CCD camera 36, the screen 34 (the first image), the spot 32, (see col. 3, lines 36-54), the blinking-pattern detection means 56 (see col. 4, lines 24-27). Therefore, Barrus teaches all of the claimed limitation of claims 1, 4 and 9, except for "extraction means for extracting, by detecting edge of the second image, the second image from the first image." However, Takaha teaches a related image processing apparatus which includes the central processing circuit 4 executing various sort of programs (col. 8, lines 59-60), an image extracting unit 17 (figure 1) to extract the image 42 (figure 3), by detecting the contour region 25 constructing by pixels of an outermost edge portion (figure 4, col. 10, lines 30-32). It would have been obvious to a person of ordinary skill in

the art at the time of the invention to incorporate the image extracting unit 17 taught by Takaha for the computer unit 18 of Barrus's system in order to extract precision of the desired extract region can be enhanced (col. 4, lines 47-48 of Takaha).

As to claim 2, Barrus teaches the position determination means 38 (see col.3, lines 36-42).

As to claim 3, Barrus teaches the second image is taken by a flow pickup 36, and the blinking-pattern detection means 56, 54, (see col. 3, line 66 through col. 4, line 11).

As to claim 5, Barrus teaches the computer 18, which inherently includes the medium for a computer readable program.

Response to Arguments

7. Applicant's arguments filed 2/28/2002 have been fully considered but they are not persuasive.
8. See the rejections above.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Kevin M. Nguyen** whose telephone number is **703-305-6209**. The examiner can normally be reached on M-F (9:00-5:00), with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Richard Hjerpe** can be reached on **703-305-4709**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

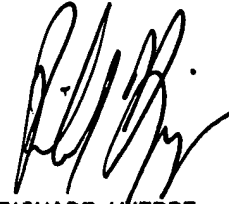
Hand-delivered response should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

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Kevin M. Nguyen
Examiner
Art Unit 2674

A handwritten signature in black ink, appearing to read 'R. Hjerpe', is positioned above the printed name.

RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600